



CHARLOTTE'S FUTURE POSSIBLE SCENARIOS

DELIVERABLE #11
February 2022

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**I.
Project
Background**

Overarching goal of HIRE Charlotte

Immediately increase Charlotte-Mecklenburg's employment ecosystem's impact on **creating and filling good jobs** that drive the economic prosperity for all of Charlotte's residents and businesses.

PROJECT GOAL #1

Develop a vision and framework – a North Star for the entire employment ecosystem on how to create and fill good jobs today and tomorrow. The framework will include shared goals (key performance indicators) and specific action steps.

PROJECT GOAL #2

Inform and help direct collective investments of the ecosystem and ARPA decision-making – how the funds should be used.

EMPLOYMENT ECOSYSTEM

JOB SEEKERS

HIGHER ED

K-12
EDUCATION

WORKFORCE TRAINING

ECONOMIC DEVELOPMENT



THIRD PARTY
RECRUITERS

SOCIAL
SERVICES

EMPLOYERS

EVALUATION

What is our North Star?

Where are we today?

Where are our unmet needs?

What's possible in the future?

What's our desired future state?



What type of job seekers are we great at serving?

What type of employers are we great at serving?

What needs does the ecosystem meet well and need to be leveraged?

What gaps in the ecosystem exist?

What type of job seekers do we want to be great at serving?

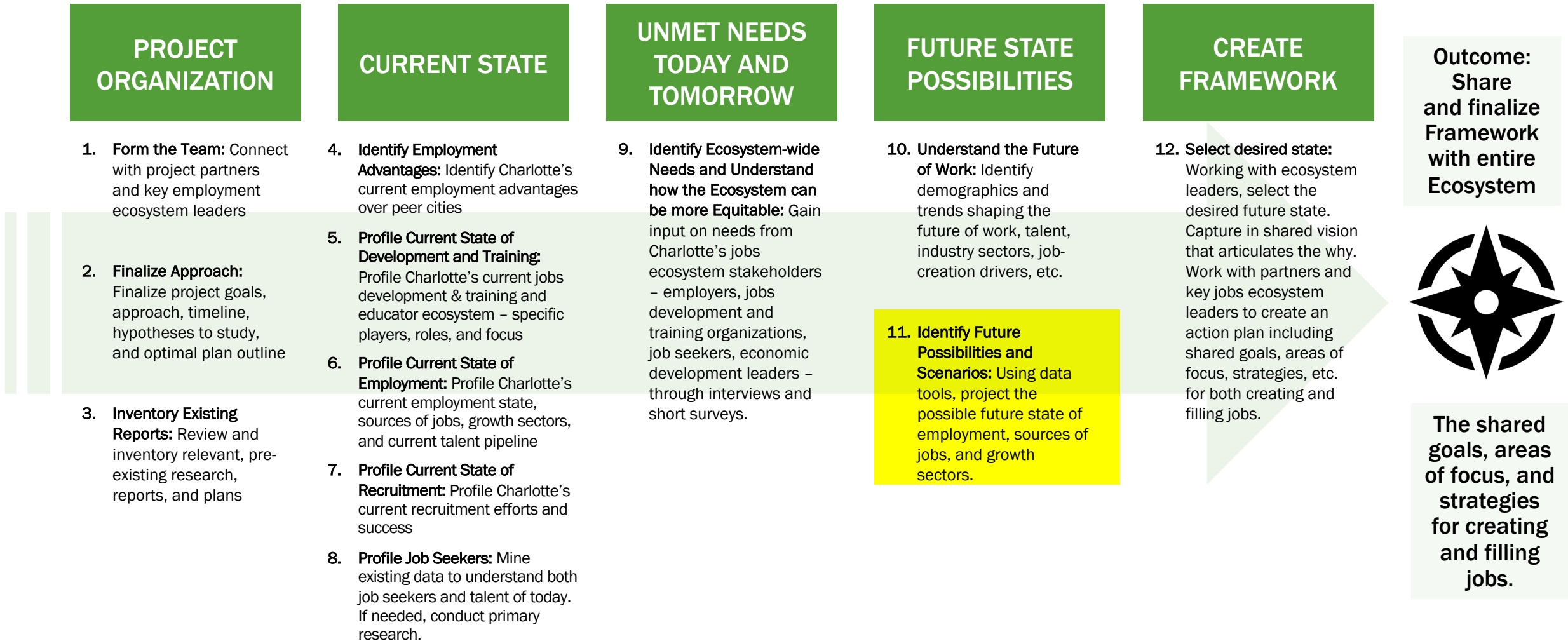
What type of employers do we want to be great at serving?

What are our goals to reach that desired future state?

What does the ecosystem look like when it works?

How will we know it is working?

12-Step process to identify our Desired Future State (our North Star) and the resulting Framework for how we will get to that Desired Future State



FUTURE STATE POSSIBILITIES

11. Identify Future Possibilities and Scenarios: Using JobsEQ, project the possible future state of employment, sources of jobs, and growth sectors.

GOAL

Identify what could be the future for the employment ecosystem with intentional intervention.

APPROACH

- SIR, in partnership with the City of Charlotte team, will mine data to:
 - Identify employment growth in key industries and occupations over the next ten years and what will happen without any intervention.
 - Identify for key targeted industries what could happen with intervention.
 - Identify what is needed for the region to become the leader for employment in those industries.
- SIR to finalize report based on all input and include implications for the overall framework.



II. Future Possible Scenarios

Future Possible Scenarios

Data on targeted industries shows that Charlotte is a strong performer and is projected to maintain continued growth.

The question is what would happen if we were more intentional about our growth? Where do we want to be relative to our peers and what kind of employment is needed to reach that goal?

This section takes a deep dive into this analysis and provides a lens on what's possible.

For this analysis, HIRE Charlotte identified 6 industry and occupation clusters as areas for focus in the next decade

- Finance (industry)
- Technology (occupation)
- Business, Management, and Administration (occupation)
- Transportation and Warehousing (industry)
- Manufacturing (industry)
- Health Sciences (occupation)

An **industry** category is a cluster of like businesses.

An **Occupation** category is a cluster of like jobs that permeate multiple industries.

These industries and occupations were identified based on their:

- Projected growth trends
- Business recruitment successes
- Strength in talent clusters.

Each industry and occupation section will flow through a series of data and analysis

- **Defining the Cluster:** Category definitions by SOC and specific Occupations that make up the cluster
- **Intentional 10-year Growth:** Series of analysis detailing natural 10-year growth and then if intentional about growth what will be needed to be competitive with peer cities.
- **Aspirational Growth:** When applicable, an analysis is detailed for what growth is needed to reach a competitive LQ with aspirational cities.
- **Fastest Growing Occupations:** Details of the leading occupations in the cluster that will help Charlotte reach competitive growth.
- **Summary**

FINANCE

INDUSTRY

FINANCE

OCCUPATION DISTRIBUTION

SOC	OCCUPATION	EMPLOYED	MEAN ANNUAL WAGES
43-4051	Customer Service Representatives	8,082	\$40,600
41-3031	Securities, Commodities, and Financial Services Sales Agents	7,663	\$104,900
13-2072	Loan Officers	6,413	\$83,200
43-3071	Tellers	6,285	\$34,500
41-3021	Insurance Sales Agents	4,972	\$65,900
13-2052	Personal Financial Advisors	4,026	\$147,000
43-1011	First-Line Supervisors of Office and Administrative Support Workers	3,851	\$61,800
43-4131	Loan Interviewers and Clerks	3,566	\$47,900
11-3031	Financial Managers	3,287	\$175,100
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	3,042	\$101,500
13-1031	Claims Adjusters, Examiners, and Investigators	2,092	\$69,000
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	2,071	\$103,500
11-1021	General and Operations Managers	1,849	\$146,500
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,843	\$44,800
13-2011	Accountants and Auditors	1,827	\$89,500
13-2061	Financial Examiners	1,691	\$75,900
43-9061	Office Clerks, General	1,636	\$37,900
43-9041	Insurance Claims and Policy Processing Clerks	1,598	\$49,700
15-1211	Computer Systems Analysts	1,586	\$99,200
13-1111	Management Analysts	1,377	\$104,400
13-1198	Project Management Specialists and Business Operations Specialists, All Other	1,324	\$80,200
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,323	\$42,300
41-1012	First-Line Supervisors of Non-Retail Sales Workers	1,072	\$113,600
13-2041	Credit Analysts	1,030	\$97,700

There are a total of 278 occupations within the Finance Occupation Distribution. This list includes those with more than 1,000 employed in each respective occupation code.

In all, a total of 93,622 people in the Charlotte MSA are employed in the Finance industry cluster.

FINANCE

Charlotte is an overall leader in finance and will continue to be even if the status quo is simply maintained

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	DIFFERENTIAL	TARGET PROJECTED GROWTH	IDEAL PROJECTED EMPLOYMENT	DIFFERENCE
CHARLOTTE	1.62	93,632	13,887	1.4%				

PEER CITIES

Dallas	1.49	238,998	41,331	1.6%
New York City	1.40	613,771	-50,002	-0.8%
Boston	1.29	144,034	82,363	-0.2%
Tampa	1.57	91,132	9,643	1.0%
Phoenix	1.69	157,219	97,404	1.4%

Average projected growth of peer cities is lower than the Charlotte baseline.

The current growth rate would allow Charlotte to remain competitive.

*No aspirational cities – Charlotte should be considered one of the top markets for finance.

FINANCE

OCCUPATION PROJECTIONS

SOC	OCCUPATION	EXITS	TRANSFERS	EMPL. GROWTH	TOTAL DEMAND
43-4051	Customer Service Representatives	4,043	7,159	699	11,901
41-3031	Securities, Commodities, and Financial Services Sales Agents	2,161	5,734	1,394	9,288
13-2072	Loan Officers	1,651	4,128	1,027	6,806
43-3071	Tellers	3,020	4,437	-309	7,148
41-3021	Insurance Sales Agents	2,014	3,266	1,043	6,323
13-2052	Personal Financial Advisors	1,016	2,342	859	4,217
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,489	2,626	140	4,255
43-4131	Loan Interviewers and Clerks	1,457	2,520	819	4,796
11-3031	Financial Managers	823	2,058	1,023	3,904
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	716	2,104	575	3,395
13-1031	Claims Adjusters, Examiners, and Investigators	522	1,326	165	2,013
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	326	1,328	593	2,248
11-1021	General and Operations Managers	425	1,334	378	2,137
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,170	1,074	150	2,395
13-2011	Accountants and Auditors	558	1,295	362	2,215
13-2061	Financial Examiners	393	1,011	395	1,799
43-9061	Office Clerks, General	956	1,093	145	2,194
43-9041	Insurance Claims and Policy Processing Clerks	617	1,050	147	1,813
15-1211	Computer Systems Analysts	321	896	231	1,449
13-1111	Management Analysts	465	945	275	1,684
13-1198	Project Management Specialists and Business Operations Specialists, All Other	389	994	256	1,639
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	686	821	36	1,542
41-1012	First-Line Supervisors of Non-Retail Sales Workers	367	723	159	1,250
13-2041	Credit Analysts	236	728	87	1,051

Those finance occupations employing the most workers will continue to be the most in-demand over the next 10-years.

Data as of 2021Q2 except wages which are as of 2020. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Data pulled by the City of Charlotte.

FINANCE

TAKEAWAYS

Charlotte is one of the top markets in the country for finance given the high concentration of workers and major financial institutions. Projected growth is higher than peer cities and some markets are projected to decline, like Boston and New York.

Charlotte should take advantage of workers and companies looking to move from those markets and continue to build its local talent pipeline.

TECHNOLOGY

OCCUPATION

TECHNOLOGY

OCCUPATIONS DEFINED

SOC	OCCUPATION	EMPLOYED	MEAN ANNUAL WAGES	LQ
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	13,524	\$104,100	0.97
15-1211	Computer Systems Analysts	8,002	\$98,600	1.47
15-1232	Computer User Support Specialists	6,855	\$53,300	1.15
15-1244	Network and Computer Systems Administrators	3,677	\$83,600	1.17
15-1212	Information Security Analysts	1,965	\$106,000	1.56
15-1231	Computer Network Support Specialists	1,945	\$77,800	1.14
15-1299	Computer Occupations, All Other	1,760	\$93,700	0.48
15-1251	Computer Programmers	1,669	\$100,900	0.99
15-1257	Web Developers and Digital Interface Designers	1,629	\$86,000	0.98
15-1241	Computer Network Architects	1,581	\$115,500	1.06
15-1245	Database Administrators and Architects	1,370	\$106,500	1.11
15-2031	Operations Research Analysts	956	\$97,500	1.09
15-2098	Data Scientists and Mathematical Science Occupations, All Other	659	\$123,900	1.18
15-2041	Statisticians	346	\$70,700	0.94
15-2011	Actuaries	235	\$156,300	1.10
15-1221	Computer and Information Research Scientists	99	\$120,500	0.36
15-2021	Mathematicians	7	\$109,100	0.30
COMPUTER AND MATHEMATICAL OCCUPATIONS		46,278	\$92,500	1.06

Source: JobsEQ®; Data as of 2021Q2; Wage data are as of 2020. Data pulled by the City of Charlotte.

TECHNOLOGY

Charlotte is a competitor with its tech workforce and with a strong focus on tech occupations it should continue to be

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	DIFFERENTIAL	TARGET PROJECTED GROWTH	IDEAL PROJECTED EMPLOYMENT	DIFFERENCE
CHARLOTTE	1.06	46,278	12,184	2.4%	0.1%	2.5%	12,489	305

PEER CITIES

Tampa	0.96	41,905	9,066	2.0%
Austin	1.75	62,575	21,870	3.0%
Nashville	0.86	28,266	5,270	2.3%
Phoenix	1.13	79,117	21,063	2.4%
Raleigh	1.61	34,178	10,004	2.6%
Dallas	1.23	149,132	43,869	2.6%

Average % Growth = 2.5%

To achieve a competitive edge in tech-related occupations with peer cities, Charlotte will need to grow projected employment numbers by an additional 305 employees over the next 10 years.

TECHNOLOGY

Looking at aspirational cities, Charlotte would need to increase it's LQ by nearly an entire point to join this group of cities

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	LQ DIFFERENTIAL	LQ TO BE A TOP CITY
CHARLOTTE	1.06	46,278	12,184	2.4%	0.98	2.04

ASPIRATIONAL CITIES

San Francisco	2.05	154,543	26,416	1.6%
Boston	1.59	133,313	16,564	1.2%
Seattle	2.49	159,649	38,018	2.2%

Average LQ = 2.04

TECHNOLOGY

There are a range of occupations with above the targeted 10-year projected growth mark of 2.5%

SOC	OCCUPATION	TOTAL DEMAND	EXITS	TRANSFERS	EMPL. GROWTH	ANN. % GROWTH
15-2041	Statisticians	515	77	252	187	4.4%
15-1212	Information Security Analysts	2,602	331	1,346	925	3.9%
15-2098	Data Scientists and Mathematical Science Occupations, All Other	918	143	470	305	3.9%
15-2031	Operations Research Analysts	1,115	258	472	385	3.4%
15-2011	Actuaries	250	30	134	86	3.2%
15-1221	Computer and Information Research Scientists	126	16	73	37	3.2%
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	16,008	2,193	8,930	4,885	3.1%
15-1257	Web Developers and Digital Interface Designers	1,739	305	1,060	374	2.1%
15-1245	Database Administrators and Architects	1,394	288	788	319	2.1%
15-2021	Mathematicians	8	1	5	2	2.1%
15-1232	Computer User Support Specialists	7,608	1,352	4,806	1,451	1.9%
15-1299	Computer Occupations, All Other	1,841	359	1,122	359	1.9%
15-1211	Computer Systems Analysts	7,879	1,658	4,625	1,595	1.8%
15-1231	Computer Network Support Specialists	2,087	380	1,350	358	1.7%
15-1244	Network and Computer Systems Administrators	3,398	674	2,102	623	1.6%
15-1241	Computer Network Architects	1,436	221	953	262	1.5%
15-1251	Computer Programmers	1,213	270	912	31	0.2%
COMPUTER AND MATHEMATICAL OCCUPATIONS		50,137	8,557	29,396	12,184	2.4%

TECHNOLOGY TAKEAWAYS

Charlotte remains competitive with peer cities on projected growth in technology occupations and is considered a peer city of Austin and Raleigh. Despite Austin and Raleigh's high concentration of tech workers, Charlotte also maintains a high concentration and has strong projected growth.

To reach an even more competitive position among peer cities, Charlotte should focus on an additional 305 workers over the next 10 years in addition to the projected additional 12,489 workers it should gain naturally.

Caution: Technology is a sector that tends to drive up cost of living. So, while growth is important, Charlotte should be careful to not grow too quickly in this sector. Thus, emphasis is not on becoming a leader in Tech occupations but rather staying competitive with its peers.

BUSINESS, MANAGEMENT, AND ADMINISTRATION

OCCUPATION

BUSINESS, MANAGEMENT AND ADMINISTRATION

OCCUPATIONS DEFINED

SOC	OCCUPATION	EMPLOYED	MEAN ANNUAL WAGES	LQ
15-2031	Operations Research Analysts	956	\$97,500	1.09
13-1161	Market Research Analysts and Marketing Specialists	7,047	\$72,300	1.06
11-3031	Financial Managers	7,109	\$172,600	1.15
13-1131	Fundraisers	608	\$60,300	0.75
13-1111	Management Analysts	8,249	\$105,200	1.05
11-3021	Computer and Information Systems Managers	4,648	\$151,600	1.08
13-1141	Compensation, Benefits, and Job Analysis Specialists	882	\$79,100	1.09
13-1071	Human Resources Specialists	6,605	\$68,900	1.09
13-1151	Training and Development Specialists	3,310	\$67,100	1.13
13-1121	Meeting, Convention, and Event Planners	1,035	\$49,300	0.95
13-1198	Project Management Specialists and Business Operations Specialists, All Other	11,078	\$79,200	0.84
43-6013	Medical Secretaries and Administrative Assistants	3,842	\$37,100	0.68
11-2021	Marketing Managers	2,714	\$149,900	1.05
11-3121	Human Resources Managers	1,448	\$143,000	0.98
11-3131	Training and Development Managers	444	\$128,100	1.20
11-1021	General and Operations Managers	19,874	\$132,900	0.91
43-3099	Financial Clerks, All Other	413	\$55,700	1.44
43-9199	Office and Administrative Support Workers, All Other	1,548	\$41,400	0.87
11-3061	Purchasing Managers	754	\$125,100	1.13
11-3111	Compensation and Benefits Managers	205	\$141,600	1.39
43-4171	Receptionists and Information Clerks	12,168	\$31,300	1.28
43-3021	Billing and Posting Clerks	4,451	\$38,900	1.05
11-3051	Industrial Production Managers	1,852	\$111,200	1.12
43-1011	First-Line Supervisors of Office and Administrative Support Workers	14,887	\$59,600	1.12
43-3051	Payroll and Timekeeping Clerks	1,395	\$46,600	1.12
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	1,025	\$40,600	1.02
11-1011	Chief Executives	1,744	\$253,300	0.72
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	16,475	\$40,100	0.92
43-6011	Executive Secretaries and Executive Administrative Assistants	3,555	\$63,100	0.75
43-6012	Legal Secretaries and Administrative Assistants	1,153	\$48,600	0.79
BUSINESS, MANAGEMENT AND ADMIN (CUSTOM)		141,472	\$84,200	0.99

Source: JobsEQ®; Data as of 2021Q2; Wage data are as of 2020. Data pulled by the City of Charlotte.

BUSINESS, MANAGEMENT, AND ADMINISTRATION

Charlotte has an opportunity to become a stronger competitor in this occupation cluster over the next 10 years

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	DIFFERENTIAL	TARGET PROJECTED GROWTH	IDEAL PROJECTED EMPLOYMENT	DIFFERENCE
CHARLOTTE	0.99	141,472	23,351	1.5%	0.2%	1.7%	24,986	1,635

PEER CITIES

Tampa	1.09	157,010	19,679	1.2%
Austin	1.11	130,645	30,516	2.1%
Denver	1.10	178,299	23,605	1.2%
Phoenix	1.08	249,675	43,295	2.6%
Raleigh	1.05	73,196	13,025	1.7%
Dallas	1.03	407,554	71,896	1.6%

To achieve a competitive edge in business, management, and admin occupations with peer cities, Charlotte will need to grow projected employment numbers by an additional 1,635 employees over the next 10 years.

Average % Growth = 1.7%

BUSINESS, MANAGEMENT, AND ADMINISTRATION

Charlotte is projected to grow these occupations at a faster rate than aspirational cities, but would still need to jump a quarter LQ point to be in the same league

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	LQ DIFFERENTIAL	LQ TO BE A TOP CITY
CHARLOTTE	0.99	141,472	23,351	1.5%	0.25	1.24

ASPIRATIONAL CITIES

New York	1.15	1,076,262	-51,809	-0.5%
Boston	1.31	361,313	6,052	0.2%
San Francisco	1.26	314,096	18,433	0.6%

Average LQ = 1.24

Note, Charlotte is projected to experience greater growth in this cluster than aspirational cities.

BUSINESS, MANAGEMENT, AND ADMINISTRATION

There are a wide range of occupations above the targeted 10-year projected growth mark of 1.7%

SOC	OCCUPATION	TOTAL DEMAND	EXITS	TRANSFERS	EMPL. GROWTH	ANN. % GROWTH
15-2031	Operations Research Analysts	1,115	258	472	385	3.4%
13-1161	Market Research Analysts and Marketing Specialists	10,681	1,940	6,384	2,357	2.9%
11-3031	Financial Managers	8,476	1,782	4,456	2,237	2.8%
13-1131	Fundraisers	872	225	484	163	2.4%
13-1111	Management Analysts	10,788	2,853	5,798	2,137	2.3%
11-3021	Computer and Information Systems Managers	5,145	876	3,144	1,124	2.2%
13-1141	Compensation, Benefits, and Job Analysis Specialists	1,123	321	603	199	2.1%
13-1071	Human Resources Specialists	8,816	1,965	5,386	1,465	2.0%
13-1151	Training and Development Specialists	4,614	1,091	2,801	722	2.0%
13-1121	Meeting, Convention, and Event Planners	1,524	364	934	226	2.0%
13-1198	Project Management Specialists and Business Operations Specialists, All Other	13,885	3,271	8,358	2,256	1.9%
43-6013	Medical Secretaries and Administrative Assistants	5,522	2,143	2,563	816	1.9%
11-2021	Marketing Managers	3,181	594	2,021	566	1.9%
11-3121	Human Resources Managers	1,643	364	982	297	1.9%
11-3131	Training and Development Managers	523	117	312	94	1.9%
11-1021	General and Operations Managers	22,663	4,543	14,277	3,843	1.8%
43-3099	Financial Clerks, All Other	570	149	338	83	1.8%
43-9199	Office and Administrative Support Workers, All Other	2,208	702	1,237	269	1.6%
11-3061	Purchasing Managers	804	195	480	129	1.6%
11-3111	Compensation and Benefits Managers	224	58	131	36	1.6%
43-4171	Receptionists and Information Clerks	19,327	7,557	9,902	1,868	1.4%
43-3021	Billing and Posting Clerks	5,653	1,929	3,153	570	1.2%
11-3051	Industrial Production Managers	1,639	412	1,000	228	1.2%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	17,554	5,891	10,387	1,276	0.8%
43-3051	Payroll and Timekeeping Clerks	1,706	681	913	111	0.8%
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	1,304	395	822	87	0.8%
11-1011	Chief Executives	1,307	478	779	49	0.3%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	18,891	8,491	10,156	244	0.1%
43-6011	Executive Secretaries and Executive Administrative Assistants	3,472	1,739	2,080	-347	-1.0%
43-6012	Legal Secretaries and Administrative Assistants	1,085	558	667	-139	-1.3%
BUSINESS, MANAGEMENT AND ADMIN (CUSTOM)		176,314	51,943	101,020	23,351	1.5%

Source: JobsEQ®; Data as of 2021Q2; Wage data are as of 2020. Data pulled by the City of Charlotte.

BUSINESS, MANAGEMENT, AND ADMINISTRATION

BUSINESS, MANAGEMENT, AND ADMINISTRATION: TAKEAWAYS

This is a custom occupation group defined by the City of Charlotte's Economic Development department. Built in JobsEQ, it reflects corporate headquarters and regional office talent demand.

To reach an even more competitive position among peer cities, Charlotte should focus on an additional 1,635 workers over the next 10 years in addition to the projected additional 23,351 workers it should gain naturally.

Charlotte's workforce in this category is growing faster than aspirational cities and is right at the national average with an LQ of 0.99. This category could benefit from local intervention to build this pipeline and become even more competitive.

TRANSPORTATION AND WAREHOUSING

INDUSTRY

TRANSPORTATION AND WAREHOUSING OCCUPATION DISTRIBUTION

SOC	OCCUPATION	EMPLOYED	MEAN ANNUAL WAGES
53-3032	Heavy and Tractor-Trailer Truck Drivers	14,575	\$49,500
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	13,699	\$32,500
53-7065	Stockers and Order Fillers	5,159	\$32,000
53-7051	Industrial Truck and Tractor Operators	4,933	\$37,400
53-3033	Light Truck Drivers	4,732	\$47,100
53-2031	Flight Attendants	3,233	\$63,100
43-5052	Postal Service Mail Carriers	2,800	\$53,900
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	2,323	\$56,600
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	2,259	\$31,600
53-2011	Airline Pilots, Copilots, and Flight Engineers	2,018	\$120,300
53-7064	Packers and Packagers, Hand	1,881	\$28,400
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	1,731	\$54,200
43-5071	Shipping, Receiving, and Inventory Clerks	1,596	\$37,200
43-4051	Customer Service Representatives	1,365	\$42,200
49-3011	Aircraft Mechanics and Service Technicians	1,333	\$80,300
43-9061	Office Clerks, General	1,145	\$37,100
43-5011	Cargo and Freight Agents	1,080	\$50,700
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	1,072	\$56,800
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,039	\$61,500

There are a total of 363 occupations within the Transportation and Warehousing Occupation Distribution. This list includes those with more than 1,000 employed in each respective occupation code.

In all, a total of 85,574 people in the Charlotte MSA are employed in the Transportation and Warehousing industry cluster.

TRANSPORTATION AND WAREHOUSING

Charlotte is an overall leader in Transportation and Warehousing and will continue to be even if the status quo is simply maintained

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	DIFFERENTIAL	TARGET PROJECTED GROWTH	IDEAL PROJECTED EMPLOYMENT	DIFFERENCE
CHARLOTTE	1.26	85,590	14,927	1.6%				

PEER CITIES

Atlanta	1.32	184,160	23,302	1.2%
Nashville	1.38	71,039	13,607	1.8%
Tampa	0.72	49,631	6,687	1.3%
Raleigh	0.72	23,426	4,175	1.7%

Average % Growth = 1.5%

Average projected growth of peer cities is lower than the Charlotte baseline.

The current growth rate would allow Charlotte to remain competitive.

*No aspirational cities – Charlotte should be considered one of the top markets for finance.

TRANSPORTATION AND WAREHOUSING OCCUPATION PROJECTIONS

SOC	OCCUPATION	EXITS	TRANSFERS	EMPL. GROWTH	TOTAL DEMAND
53-3032	Heavy and Tractor-Trailer Truck Drivers	6,372	11,345	2,099	19,815
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	6,840	14,287	3,263	24,390
53-7065	Stockers and Order Fillers	2,846	4,575	895	8,315
53-7051	Industrial Truck and Tractor Operators	1,597	4,419	842	6,858
53-3033	Light Truck Drivers	2,198	3,913	1,378	7,488
53-2031	Flight Attendants	1,933	2,231	1,074	5,238
43-5052	Postal Service Mail Carriers	1,016	1,072	-3	2,085
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	816	1,912	492	3,220
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	1,813	1,296	654	3,764
53-2011	Airline Pilots, Copilots, and Flight Engineers	607	1,605	327	2,540
53-7064	Packers and Packagers, Hand	1,120	1,568	-34	2,654
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	781	1,339	276	2,395
43-5071	Shipping, Receiving, and Inventory Clerks	544	1,089	111	1,744
43-4051	Customer Service Representatives	684	1,212	126	2,022
49-3011	Aircraft Mechanics and Service Technicians	391	796	244	1,430
43-9061	Office Clerks, General	663	758	80	1,501
43-5011	Cargo and Freight Agents	422	691	198	1,310
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	319	742	150	1,210
43-1011	First-Line Supervisors of Office and Administrative Support Workers	417	736	126	1,278

**In most cases, those
Transportation and
Warehousing
occupations employing
the most workers will
continue to be the most
in-demand over the next
10-years.**

Data as of 2021Q2 except wages which are as of 2020. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Data pulled by the City of Charlotte.

TRANSPORTATION AND WAREHOUSING TAKEAWAYS

Charlotte is one of the markets with the highest growth rates for the Transportation and Warehousing (i.e., Logistics) sector. Though talent is a big factor in industry growth, it will also depend on regional infrastructure, including real estate and transit options.

This industry is not intra-nationally competitive but more regional in nature, so our peer cities reflect that proximity.

MANUFACTURING

INDUSTRY

MANUFACTURING

OCCUPATION DISTRIBUTION

SOC	OCCUPATION	EMPLOYED	MEAN ANNUAL WAGES
51-2092	Team Assemblers	10,296	\$34,300
51-1011	First-Line Supervisors of Production and Operating Workers	5,041	\$61,600
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	4,083	\$31,300
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	3,872	\$39,300
51-4041	Machinists	2,892	\$46,400
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,701	\$85,300
51-9111	Packaging and Filling Machine Operators and Tenders	2,669	\$31,600
51-4121	Welders, Cutters, Solderers, and Brazers	2,603	\$43,000
49-9041	Industrial Machinery Mechanics	2,351	\$54,700
43-5071	Shipping, Receiving, and Inventory Clerks	2,294	\$35,500
49-9071	Maintenance and Repair Workers, General	2,194	\$44,900
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	2,159	\$44,500
51-6031	Sewing Machine Operators	1,990	\$30,400
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	1,931	\$35,500
17-2112	Industrial Engineers	1,904	\$83,500
53-7064	Packers and Packagers, Hand	1,878	\$26,400
53-7051	Industrial Truck and Tractor Operators	1,861	\$36,300
11-1021	General and Operations Managers	1,854	\$135,000
51-9198	Helpers--Production Workers	1,804	\$30,400
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	1,701	\$36,000
43-9061	Office Clerks, General	1,674	\$35,500
43-4051	Customer Service Representatives	1,646	\$40,200
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,592	\$46,000
51-7011	Cabinetmakers and Bench Carpenters	1,579	\$31,600

There are a total of 479 occupations within the Manufacturing Occupation Distribution. This list includes those with more than 1,500 employed in each respective occupation code.

In all, a total of 129,394 people in the Charlotte MSA are employed in the Manufacturing industry cluster.

Data as of 2021Q2 except wages which are as of 2020. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Data pulled by the City of Charlotte.

MANUFACTURING

Charlotte has an opportunity to become a stronger competitor in this industry cluster over the next 10 years

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	DIFFERENTIAL	TARGET PROJECTED GROWTH	IDEAL PROJECTED EMPLOYMENT	DIFFERENCE
CHARLOTTE	1.14	129,406	8,555	0.6%	0.3%	0.9%	9,325	770

PEER CITIES

Dallas	0.90	283,276	28,719	1.0%
Atlanta	0.72	166,526	10,220	0.6%
Nashville	0.95	81,102	9,628	1.1%

Average % Growth = 0.9%

To maintain a competitive edge in the manufacturing industry with peer cities, Charlotte will need to grow projected employment numbers by an additional 770 employees over the next 10 years.

*No aspirational cities – Charlotte should be considered one of the top markets for Manufacturing.

MANUFACTURING

OCCUPATION PROJECTIONS

SOC	OCCUPATION	EXITS	TRANSFERS	EMPL. GROWTH	TOTAL DEMAND
51-2092	Team Assemblers	4,081	7,564	-773	10,871
51-1011	First-Line Supervisors of Production and Operating Workers	1,687	3,690	485	5,862
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1,928	4,027	441	6,395
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	1,479	3,105	-400	4,184
51-4041	Machinists	1,029	2,121	487	3,636
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	847	2,089	263	3,200
51-9111	Packaging and Filling Machine Operators and Tenders	1,256	2,055	396	3,708
51-4121	Welders, Cutters, Solderers, and Brazers	722	2,333	376	3,431
49-9041	Industrial Machinery Mechanics	829	1,604	710	3,143
43-5071	Shipping, Receiving, and Inventory Clerks	754	1,508	-18	2,244
49-9071	Maintenance and Repair Workers, General	804	1,423	226	2,453
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	649	1,708	-9	2,347
51-6031	Sewing Machine Operators	1,176	1,095	62	2,333
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	888	1,466	277	2,631
17-2112	Industrial Engineers	419	1,006	427	1,851
53-7064	Packers and Packagers, Hand	1,176	1,647	170	2,993
53-7051	Industrial Truck and Tractor Operators	583	1,614	185	2,383
11-1021	General and Operations Managers	407	1,280	193	1,880
51-9198	Helpers--Production Workers	993	1,760	158	2,911
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	653	1,272	27	1,953
43-9061	Office Clerks, General	932	1,065	-23	1,974
43-4051	Customer Service Representatives	782	1,385	-34	2,132
53-3032	Heavy and Tractor-Trailer Truck Drivers	658	1,171	33	1,861
51-7011	Cabinetmakers and Bench Carpenters	673	993	48	1,715

In most cases, those Transportation and Warehousing occupations employing the most workers will continue to be the most in-demand over the next 10-years.

Yet, there are a handful of occupations that are shrinking in terms of overall growth.

Data as of 2021Q2 except wages which are as of 2020. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Data pulled by the City of Charlotte.

MANUFACTURING TAKEAWAYS

Charlotte is one of the few metro areas in which Manufacturing is poised to grow. Yet, most cities in the southeast are also poised to grow, meaning they will be Charlotte's biggest competitors.

The Manufacturing industry has the oldest workforce and biggest opportunities for local talent interventions.

HEALTH SCIENCES

OCCUPATION

HEALTH SCIENCES

OCCUPATIONS DEFINED

A total of 77 occupations are included, below represents those with 700 more employed

SOC	OCCUPATION	EMPLOYED	MEAN ANNUAL WAGES	LQ
29-1141	Registered Nurses	22,445	\$70,000	0.81
31-1131	Nursing Assistants	11,825	\$29,100	0.94
31-9092	Medical Assistants	6,290	\$35,800	0.94
29-2061	Licensed Practical and Licensed Vocational Nurses	4,428	\$47,300	0.72
31-1121	Home Health Aides	4,363	\$23,400	0.54
43-6013	Medical Secretaries and Administrative Assistants	3,842	\$37,100	0.68
29-2052	Pharmacy Technicians	3,433	\$33,800	0.90
29-1228	Physicians, All Other; and Ophthalmologists, Except Pediatric	3,396	\$212,400	0.92
31-9091	Dental Assistants	3,094	\$45,400	0.95
29-2098	Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other	2,982	\$44,000	1.01
11-9111	Medical and Health Services Managers	2,764	\$109,300	0.72
29-1051	Pharmacists	2,563	\$124,600	0.86
29-1292	Dental Hygienists	2,156	\$73,600	1.05
29-1171	Nurse Practitioners	1,769	\$108,200	0.87
29-2034	Radiologic Technologists and Technicians	1,667	\$59,000	0.86
29-1123	Physical Therapists	1,658	\$86,500	0.75
29-1071	Physician Assistants	1,562	\$111,200	1.30
29-2011	Medical and Clinical Laboratory Technologists	1,197	\$52,500	0.76
29-1021	Dentists, General	1,188	\$174,600	1.00
29-2012	Medical and Clinical Laboratory Technicians	1,166	\$52,500	0.76
29-1127	Speech-Language Pathologists	1,090	\$77,800	0.79
31-9097	Phlebotomists	1,081	\$35,400	0.89
29-2056	Veterinary Technologists and Technicians	1,065	\$35,400	1.00
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	1,034	\$29,700	1.07
29-1126	Respiratory Therapists	965	\$60,400	0.80
29-1122	Occupational Therapists	881	\$81,200	0.73
29-1131	Veterinarians	839	\$147,900	1.00
29-2055	Surgical Technologists	804	\$44,900	0.80
29-2053	Psychiatric Technicians	774	\$34,900	1.01
31-9099	Healthcare Support Workers, All Other	742	\$35,200	0.83
HEALTH SCIENCES (CTE CLUSTER)		105,028	\$68,300	0.82

Source: JobsEQ®; Data as of 2021Q2; Wage data are as of 2020. Data pulled by the City of Charlotte.

HEALTH SCIENCES

Charlotte has an opportunity to become a stronger competitor in this occupation cluster over the next 10 years

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	DIFFERENTIAL	TARGET PROJECTED GROWTH	IDEAL PROJECTED EMPLOYMENT	DIFFERENCE
CHARLOTTE	1.00	105,028	25,048	2.2%	0.1%	2.3%	25,298	250

PEER CITIES

Tampa	1.08	139,198	29,437	1.9%
Dallas	0.84	298,960	79,896	2.4%
Austin	0.76	79,820	25,611	2.8%
Nashville	1.04	101,207	22,207	2.0%

Average % Growth = 2.3%

To achieve a competitive edge in health sciences occupations with peer cities, Charlotte will need to grow projected employment numbers by an additional 250 employees over the next 10 years.

HEALTH SCIENCES

Charlotte is projected to grow these occupations at a faster rate than aspirational cities and only needs to grow its LQ by 0.16 to be in the same league

	LQ	CURRENT EMPLOYMENT	PROJECTED EMPLOYMENT GROWTH (10-YEAR)	% GROWTH	LQ DIFFERENTIAL	LQ TO BE A TOP CITY
CHARLOTTE	1.00	105,028	25,048	2.2%	0.16	1.16

ASPIRATIONAL CITIES

Boston	1.14	449,797	50,889	1.1%
Baltimore	1.15	144,147	6,548	0.4%
Philadelphia	1.2	314,097	19,088	0.6%

Average LQ = 1.16

Note, Charlotte is projected to experience greater growth in this cluster than aspirational cities.

HEALTH SCIENCES

There are a wide range of occupations above the targeted 10-year projected growth mark of 2.3%

SOC	OCCUPATION	TOTAL DEMAND	EXITS	TRANSFERS	EMPL. GROWTH	ANN. % GROWTH
29-1171	Nurse Practitioners	2,469	459	780	1,231	5.4%
11-9111	Medical and Health Services Managers	3,928	831	1,827	1,269	3.9%
29-1071	Physician Assistants	1,762	280	766	716	3.8%
31-1121	Home Health Aides	7,746	2,800	3,008	1,938	3.7%
29-1127	Speech-Language Pathologists	1,065	251	427	386	3.1%
29-1126	Respiratory Therapists	893	298	276	318	2.9%
31-9092	Medical Assistants	9,831	2,788	5,076	1,967	2.8%
31-9097	Phlebotomists	1,611	453	832	327	2.7%
29-2056	Veterinary Technologists and Technicians	1,297	350	627	320	2.7%
29-1123	Physical Therapists	1,255	337	430	487	2.6%
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	2,189	631	1,251	307	2.6%
29-1131	Veterinarians	610	180	180	250	2.6%
29-1122	Occupational Therapists	792	217	336	239	2.4%
31-9099	Healthcare Support Workers, All Other	1,083	400	522	162	2.0%
31-1131	Nursing Assistants	16,865	6,974	7,491	2,401	1.9%
29-2061	Licensed Practical and Licensed Vocational Nurses	4,625	1,649	2,037	938	1.9%
43-6013	Medical Secretaries and Administrative Assistants	5,522	2,143	2,563	816	1.9%
31-9091	Dental Assistants	4,370	1,548	2,221	601	1.8%
29-2098	Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other	2,698	917	1,201	580	1.8%
29-2011	Medical and Clinical Laboratory Technologists	1,058	365	456	237	1.8%
29-2012	Medical and Clinical Laboratory Technicians	1,030	355	444	230	1.8%
29-2053	Psychiatric Technicians	837	245	438	154	1.8%
29-1141	Registered Nurses	17,398	6,817	6,330	4,251	1.7%
29-1292	Dental Hygienists	1,972	982	585	406	1.7%
29-2034	Radiologic Technologists and Technicians	1,307	452	543	312	1.7%
29-2055	Surgical Technologists	854	253	453	148	1.7%
29-1228	Physicians, All Other; and Ophthalmologists, Except Pediatric	1,653	586	476	590	1.6%
29-2052	Pharmacy Technicians	3,552	1,070	1,919	563	1.5%
29-1021	Dentists, General	577	280	114	183	1.4%
29-1051	Pharmacists	1,403	639	559	205	0.8%
HEALTH SCIENCES (CTE CLUSTER)		113,778	39,283	49,446	25,048	2.2%

Source: JobsEQ®; Data as of 2021Q2; Wage data are as of 2020. Data pulled by the City of Charlotte.

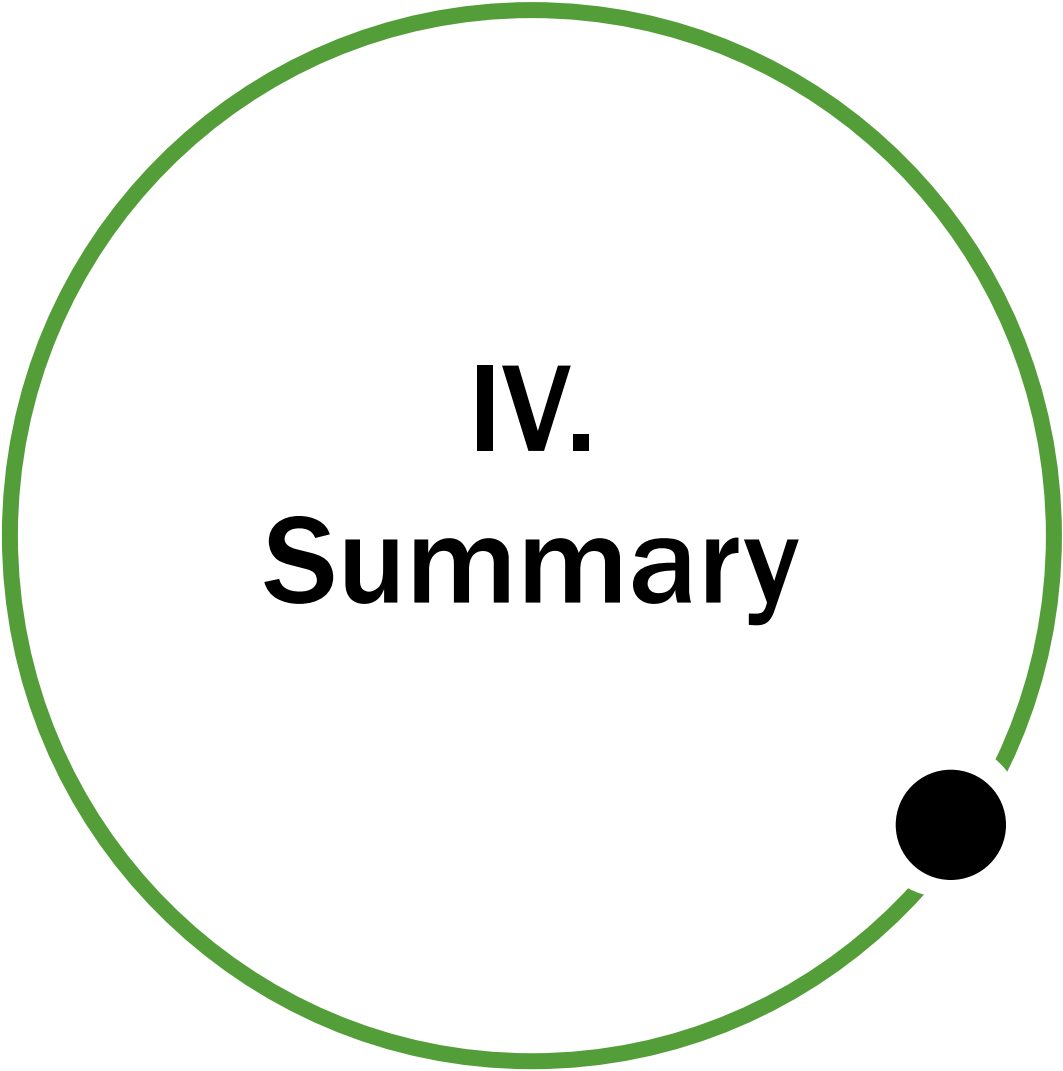
HEALTH SCIENCES

TAKEAWAYS

Charlotte is projected to grow at a competitive rate with peer cities. To reach an even more competitive position among peer cities, Charlotte should focus on an additional 250 workers over the next 10 years in addition to the projected additional 25,048 workers it should gain naturally.

Charlotte's workforce in this category is growing faster than aspirational cities and is right at the national average with an LQ of 1.0.

The workforce strategies with this sector will need to be intentional. There are great opportunities for this intentionality with future plans for Atrium and Wake Forest's Innovation Campus. The new medical school and local programs should be helpful in covering the demand for direct health care provider occupations.



IV. Summary

SUMMARY

Cluster Snapshot

SECTOR	INDUSTRY/ OCCUPATION GROUP	CURRENT PROJECTED GROWTH	TARGET PROJECTED GROWTH	CURRENT EMPLOYMENT	CURRENT PROJECTED EMPLOYMENT (10 YEARS)	TARGETED EMPLOYMENT GROWTH (10 YEARS)	GAP (# EMPLOYEES TO ADD TO REMAIN COMPETITIVE)	CURRENT LQ	ASPIRATIONAL LQ
Finance	Industry	1.4%	1.4%	93,632	13,887	13,887	None	1.62	1.62
Technology	Occupation	2.4%	2.5%	46,278	12,184	12,489	305	1.06	2.04
Business, Management and Administration	Occupation	1.5%	1.7%	141,472	23,351	24,986	1,635	0.99	1.24
Transportation and Warehousing	Industry	1.6%	1.6%	85,590	14,927	14,927	None	1.26	1.26
Manufacturing	Industry	0.6%	0.9%	129,406	8,555	9,325	770	1.14	1.14
Health Sciences	Occupation	2.2%	2.3%	105,028	25,048	25,298	250	1.00	1.16

The targeted industries and occupations represent a range of wages denoting the opportunities for all types of workers and opportunities for upward mobility

SECTOR	INDUSTRY/ OCCUPATION GROUP	CURRENT EMPLOYMENT	MEAN ANNUAL WAGES	LOWEST WAGE BY OCCUPATION	HIGHEST WAGE BY OCCUPATION
Finance	Industry	93,632	--	\$22,600	\$127,500
Technology	Occupation	46,278	\$92,500	\$53,300	\$156,300
Business, Management and Administration	Occupation	141,472	\$84,200	\$31,300	\$253,300
Transportation and Warehousing	Industry	85,590	--	\$21,800	\$232,800
Manufacturing	Industry	129,406	--	\$21,600	\$188,600
Health Sciences	Occupation	105,028	\$68,300	\$23,400	\$313,500

Source: JobsEQ®; Data as of 2021Q2; Wage data are as of 2020. Data pulled by the City of Charlotte.



Summary

- Overall, Charlotte is competitive with its peer cities. In areas where it is trailing, it is only by small gaps. Charlotte is well-positioned to be competitive in each of these sectors.
- Charlotte is already leading in the two clusters of Finance and Transportation and Warehousing. While this analysis may not result in a specific employment target goal for those clusters, the goal should be to ensure Charlotte stays competitive by having a robust and clear talent pipeline for future employees to easily enter the workforce in these fields.
- One of the core goals of HIRE Charlotte is helping accelerate upward mobility for all residents. The key to mobility in these sectors is creating pathways that will allow multiple points of entry into the industry. This is something workforce and education organizations have been aligning on and will continue to in the future.